

Attorney's Docket No. K&A 23-0418

APPLICATION

FOR UNITED STATES LETTERS PATENT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, **JEREMY HAUK**, a citizen of
UNITED STATES OF AMERICA, have invented a new and useful
PUMP DISCHARGE CONDUIT SYSTEM of which the following is
a specification:

PUMP DISCHARGE CONDUIT SYSTEM

5

BACKGROUND OF THE INVENTION

Field of the Invention

10 The present invention relates to pipe connecting devices and more particularly pertains to a new pump discharge conduit system for allowing discharge from a pump to be discharged out of the structure.

15 **Description of the Prior Art**

 The use of pipe connecting devices is known in the prior art. U.S. Patent No. 5,110,157 describes a system for connecting joining 20 a water faucet to a supply line. Another type of pipe connecting device is U.S. Patent No. 3,851,898 having a pipe connecting device that is coupled to a submersible pump that maintains pumping efficiency over long periods of operation of the pump. U.S. Patent No. 4,564,041 has a quick disconnect for allowing a 25 sump pump to be readily disconnected and reconnected to a discharge conduit when the sump pump is raised and lowered. U.S. Patent No. 3,365,215 has a flange extending outwardly from each of the tubes where the flanges are connected together to allow fluid communication between the tubes. U.S. Patent No. 5,507,628 has a 30 lift out coupling the allows a sump pump to be easily disconnected from and reconnected to a discharge pipe. U.S. Patent No. 3,260,539 has a quick connecting coupler for facilitating

disconnection and reconnection of fluid conduit. U.S. Patent No. 4,392,790 has a coupling system allow for permitting an outlet of a submersible pump to be easily disconnected and reconnected to an inlet port of a discharge conduit. U.S. Patent No. 5,906,479 has a universal pump coupling system for allowing various configurations of submersible pumps to be mounted in a pumping station. U.S. Patent No. 3,880,553 has a pumping a system for allowing a submersible pump with a detachable coupling to engage a discharge conduit to allow the submersible pump when the submersible pump is lowered into the wet well. U.S. Patent No. 4,620,817 having an underground pipe extending away from a sump pump or a downspout that disperses water into the soil or into a tank that bleeds the water into the soil. U.S. Patent No. 5,882,508 has a cleaning system for a gutter to allow for easy cleaning of gutter and eaves to ensure proper operation of the gutters.

While these devices fulfill their respective, particular objectives and requirements, the need remains for a system that has certain improved features that maintains positioning of an output conduit extending through the wall of a structure.

SUMMARY OF THE INVENTION

The present invention meets the needs presented above by providing a retaining member and a backing member coupled to the output conduit on opposite side of the wall to inhibit movement of the output conduit with respect to the wall.

Still yet another object of the present invention is to provide a new pump discharge conduit system that seals the area of the wall

around the output conduit to inhibit environmental elements, such as rain and snow, and insects from entering the structure between the wall and output conduit.

5 Even still another object of the present invention is to provide a new pump discharge conduit system that allows the backing member to match the angle of the exterior face of wall.

To this end, the present invention generally comprises an
10 output conduit being designed for extending through the wall of the structure. The output conduit comprises an inlet end and an outlet end. The inlet end of the output conduit is designed for being positioned in an interior of the structure whereby the inlet end is in fluid communication with the pump. The outlet end of the output
15 conduit is positioned outside of the structure whereby the output conduit is for directing discharge from the pump to the outside of the structure through the outlet aperture.

There has thus been outlined, rather broadly, the more
20 important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter
25 of the claims appended hereto.

The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this
30 disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such
5 description makes reference to the annexed drawings wherein:

Figure 1 is a side view of a new pump discharge conduit system with the bend according to the present invention shown in use.

10 Figure 2 is a side view of the present invention.

Figure 3 is a side view of the present invention with the bend for use with a flat exterior surface of the wall.

15 Figure 4 is a side view of the present invention for use with a flat exterior surface of the wall.

20 Figure 5 is a cross-sectional view of the present invention as taken along line 5-5 of Figure 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to
25 Figures 1 through 5 thereof, a new pump discharge conduit system embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

As best illustrated in Figures 1 through 5, the pump discharge
30 conduit system 10 generally comprises an output conduit 11 being designed for extending through the wall of the structure. The output conduit 11 comprises an inlet end 12 and an outlet end 13. The inlet end 12 of the output conduit 11 is designed for being

positioned in an interior of the structure whereby the inlet end 12 is in fluid communication with the pump. The outlet end 13 of the output conduit 11 is positioned outside of the structure whereby the output conduit 11 is for directing discharge from the pump to the
5 outside of the structure through the outlet aperture. The output conduit 11 is about 2 inches in diameter and between about 22 inches and 24 inches in length.

A retaining member 14 is selectively coupled to the output
10 conduit 11 whereby the retaining member 14 extends outwardly from the output conduit 11. The retaining member 14 is designed for abutting an interior face of the wall of the structure that the output conduit 11 extends through to inhibit sliding of the output conduit 11 with respect to the wall.

15 A backing member 15 is integrally coupled to the output conduit 11, as shown in Figure 1, whereby the backing member 15 extends outwardly from the output conduit 11. Alternately, the backing member 15 may be selectively coupled to the output
20 conduit 11, as shown in Figures 2 through 5. The backing member 15 is positioned in spaced relationship to the retaining member 14 whereby the backing member 15 is designed for abutting an exterior face of the wall of the structure. The backing member 15 and the retaining member 14 are designed for pressing against the wall to
25 inhibit sliding of the output conduit 11 with respect to the wall.

A seal member 16 is selectively positioned around the output conduit 11. The seal member 16 abuts against the backing member 15 whereby the seal member 16 is designed for being positioned
30 between the backing member 15 and the wall of the structure. The

seal member 16 is designed for sealing an area of the wall adjacent to the output conduit 11 whereby the seal member 16 is designed for inhibiting environmental elements and insects from entering the structure between the wall and the output conduit 11. The seal
5 member 16 comprises a flexible material. The flexible material is designed for conforming to a shape of the wall and filling any gaps between the wall and the output conduit 11 to inhibit the environmental elements and insects from entering the structure between the wall and the output conduit 11.

10

The output conduit 11 comprises a positioning thread 17. The positioning thread 17 is positioned between the inlet end 12 and the output end. In the alternate, as shown in Figures 2 through 5, the backing member 15 threadably engages the positioning thread 17
15 whereby rotation of the backing member 15 with respect to the output conduit 11 changes the positioning of the backing member 15 along the output conduit 11. The retaining member 14 threadably engages the positioning thread 17 whereby rotation of the retaining member 14 with respect to the output conduit 11
20 changes the positioning of the retaining member 14 along the output conduit 11 to permit the backing member 15 and the retaining member 14 to be adjusted to accommodate the wall positioned between the backing member 15 and the retaining member 14.

25 The output conduit 11 comprises an exterior outlet thread 18. The exterior outlet thread 18 is positioned adjacent the outlet end 13 of the output conduit 11 whereby the exterior outlet thread 18 is positioned in an exterior surface of the output conduit 11. The exterior outlet thread 18 is designed for being threadably engaged
30 by a female drainage coupling to allow drainage piping to be

coupled to the output conduit 11 to direct the discharge from the pump away from the output conduit 11.

- The output conduit 11 comprises an interior outlet thread 19.
- 5 The interior outlet thread 19 is positioned adjacent the outlet end 13 of the output conduit 11 whereby the interior outlet thread 19 is positioned in an interior surface of the output conduit 11. The interior outlet thread 19 is designed for being threadably engaged by a male drainage coupling to allow drainage piping to be coupled 10 to the output conduit 11 to direct the discharge from the pump away from the output conduit 11.

- The output conduit 11 comprises an exterior inlet thread 20.
- 15 The exterior inlet thread 20 is positioned adjacent the inlet end 12 of the output conduit 11 whereby the exterior inlet thread 20 is positioned in an exterior surface of the output conduit 11. The exterior inlet thread 20 is designed for being threadably engaged by a female discharge coupling to allow discharge piping from the pump to be coupled to the output conduit 11 to direct the discharge 20 from the pump into the output conduit 11.

- The output conduit 11 comprises an interior inlet thread 21.
- 25 The interior inlet thread 21 is positioned adjacent the inlet end 12 of the output conduit 11 whereby the interior inlet thread 21 is positioned in an interior surface of the output conduit 11. The interior inlet thread 21 is designed for being threadably engaged by a male discharge coupling to allow discharge piping from the pump to be coupled to the output conduit 11 to direct the discharge from the pump into the output conduit 11.

In an embodiment, the backing member 15 is positioned at an oblique angle to the output conduit 11. The backing member 15 is designed for abutting against an oblique exterior face of the wall to allow the backing member 15 to apply force against the wall evenly 5 to prevent the backing member 15 from damaging the wall when the backing member 15 abuts the wall.

In an embodiment, the output conduit 11 comprises a bend positioned between the positioning thread 17s and the outlet end 13 10 of the output conduit 11. The bend positions the outlet end 13 at an angle to allow the outlet end 13 to directed in a desired direction to facilitate the discharge of the pump being directed away from the structure.

15 In use, the user forms a hole in the wall of the structure and inserts the output conduit 11 into the hole extending through the wall, alternately the output conduit 11 may be inserted into wet concrete so that the output conduit 11 is set in the concrete as it dries. The seal member 16 is positioned on the output conduit 11 20 so that the seal member 16 is positioned against the exterior face of the wall. The backing member 15 is positioned on the output conduit 11 and engages the positioning thread 17 and is rotated until the backing member 15 abuts the seal member 16. The retaining member 14 is positioned on the output conduit 11 until 25 the retaining member 14 engages the positioning thread 17 and is rotated until the retaining member 14 abuts the wall and backing member 15 is drawn against the wall so that the seal member 16 seals the area of the wall around the output conduit 11. The discharge piping from the pump is coupled to the inlet end 12 of the 30 output conduit 11 and the drainage piping is coupled to the outlet end 13 of the output conduit 11 to allow the discharge from the

pump to exit the structure to the outside environment and away from the structure.

With respect to the above description then, it is to be realized
5 that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and
10 described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous
15 modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.